IN THE CLAIMS

Claims 1-15 (Canceled).

16 (Currently Amended). A semiconductor memory device comprising:

a semiconductor substrate;

a layer of chalcogenide material over said substrate, said chalcogenide material including a species to reduce the grain size of the chalcogenide material and a species to increase the crystallization speed of said chalcogenide material; ~~and~~

an insulator over said substrate and under said chalcogenide material; and

a heater extending through said insulator to said chalcogenide material to heat said chalcogenide material.

17 (Original). The device of claim 16 wherein said chalcogenide material includes $Ge_2Sb_2Te_5$.

18 (Original). The device of claim 16 wherein the grains of the chalcogenide material are less than approximately 10 nanometers.

19 (Original). The device of claim 16 wherein the species to reduce grain size includes nitrogen.

20 (Original). The device of claim 16 wherein the species to increase crystallization speed includes titanium.

Claims 21-23 (Canceled).

24 (Original). The device of claim 16 including titanium containing layer under said chalcogenide material.

25 (Original). The device of claim 24 wherein said titanium containing layer is sufficiently proximate to said chalcogenide material that titanium may diffuse into the phase change material upon heating.

Claims 26-30 (Canceled).